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IS 6832 (1985): Specification for Fixing Screws and Fixing Washers for Buckets for Bucket Elevators [MED 6: Continuous Bulk Conveying, Elevating, Hoisting Aerial Ropeways and Related Equipment]

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“Knowledge is such a treasure which cannot be stolen”





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Indian Standard



# SPECIFICATION FOR FIXING SCREWS AND FIXING WASHERS FOR BUCKETS FOR BUCKET ELEVATORS

(First Revision)

**1. Scope** — Lays down the requirements for special type of fixing screws and washers used for fixing buckets for bucket elevators to belts.

## 2. Dimensions

**2.1 Fixing Screws** — Shall be as specified in Table 1.

**2.2 Cup Washers** — Shall be as specified in Table 2.

## 3. Material and Mechanical Properties

**3.1** The fixing screws shall conform to the property class 4.6 of IS : 1367 (Part 3) - 1979 'Technical supply conditions for threaded steel fasteners: Part 3 Mechanical properties and test methods for bolts, screws and studs with full loadability (second revision)'.

**3.2** The cup washers shall be manufactured from steel or from any other suitable material specified by the purchaser.

## 4. Designation

**4.1** A fixing screw of nominal size M6 and of length 35 mm and provided with nut shall be designated as:

Fixing Screw M6 × 35 N IS : 6832

**Note** — Letter N shall be used only if fixing screw is provided with nut.

**4.2** A cup washer of nominal size 7 mm shall be designated as:

Cup Washer 7 IS : 6832

## 5. General Requirements

**5.1** The fixing screws shall conform to product grade C specified in IS : 1367 (Part 2) - 1979 'Technical supply conditions for threaded steel fasteners: Part 2 Product grades and tolerances (second revision)'.

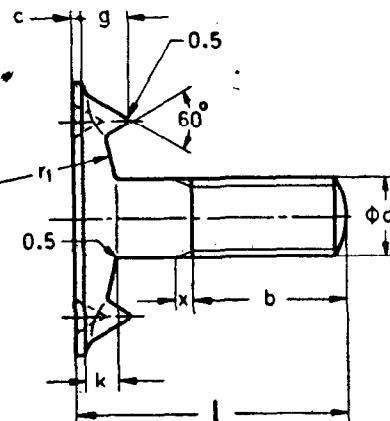
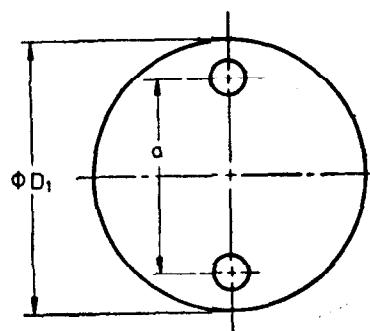
**5.2** The fixing screws shall have 'coarse' pitch threads according to IS : 4218 (Part 2) - 1976 'ISO metric screw threads: Part 2 Diameter pitch combination'.

**5.3** The fixing screws conforming to this standard shall comply with the requirements of IS : 1367 (Part 1) - 1980 'Technical supply conditions for threaded steel fasteners: Part 1 Introduction and general information (second revision)' in regard to the requirements not specified in the standard.

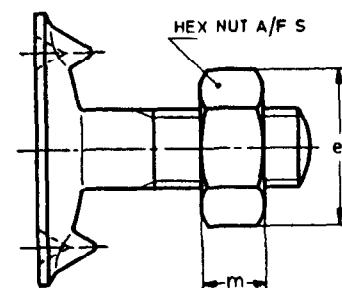
TABLE 1 DIMENSIONS FOR FIXING SCREWS FOR BUCKETS FOR BUCKET ELEVATORS

( Clause 2.1 )

All dimensions in millimetres.



WITHOUT NUT



WITH NUT

X according to IS : 1369-1982 'Dimensions of screw thread runouts and undercuts ( second revision )'.

Nominal Size $d_1$	M6	M8	M10	M12
$s$	10	13	17	19
$D_1$	20	28	35	42
$a$	14	20	25	30
$c$ (Max)	1	1	1	1.2
$e$ (Min)	10.89	14.20	18.72	20.88
$g$	3.5	5	6	7
$k$	2.5	3.5	4.5	5.2
$m$ (Nom)	5.0	6.5	8.0	10
$r_1$	20	28	35	42
Length $l$	$b$ *Mass Approx	$b$ *Mass Approx	$b$ *Mass Approx	$b$ *Mass Approx
20	12 8.96	— —	— —	— —
25	15 9.82	15 21.3	— —	— —
30	— —	18 23.2	18 42.9	— —
35	— —	18 25.0	20 45.8	20 60.0
40	— —	— —	20 48.7	25 63.6
50	— —	— —	20 54.5	28 72.1
60	— —	— —	— —	28 80.6
70	— —	— —	— —	28 89.3
Maximum of 1 000 pieces of nut in kg approx	2.32	4.62	10.9	15.9

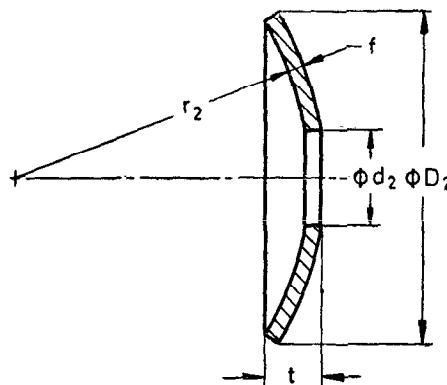
Note — Density of steel taken as 7.85 kg/dm<sup>3</sup>.

\*Mass with nut for 1 000 pieces of screws in kg.

TABLE 2 DIMENSIONS FOR WASHERS

(Clause 2.2)

All dimensions in millimetres.



Nominal Size $d_s$	$D_s$	$r_s$	$f$	$t$	Mass of 1 000 Pieces in kg* Approx	For Fixing Screw
7	25	22	1.5	4.5	5.4	M6
9.5	32	28	1.5	5.5	8.8	M8
11.5	40	36	2	7	18.3	M10
14	50	46	2	8	28.7	M12

Note — There shall not be any sharp corner.

\*Density of steel taken as 7.85 kg/dm<sup>3</sup>.

**5.4** The nuts if supplied with the fixing screws shall conform to property class 4 of IS : 1367 (Part 6)-1980 'Technical supply conditions for threaded steel fasteners: Part 6 Mechanical properties and test methods for nuts with specified proof loads (second revision)'.

**5.5** An illustration of the use of fixing screw is indicated in Fig. 1.

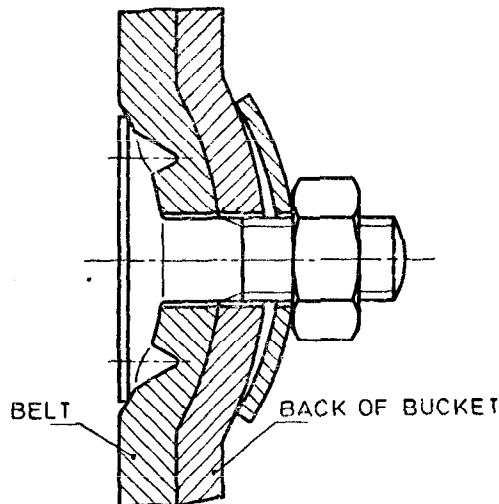


FIG. 1 ILLUSTRATION OF FIXING SCREW AND WASHER

**5.6** The ends of screws shall conform to IS : 1368-1980 'Dimensions for ends of bolts and screws (second revision)'.

## 6. Packing and Marking

**6.1** The fixing screws shall be packed in accordance with IS : 1367 (Part 18) - 1979 'Technical supply conditions for threaded steel fasteners: Part 18 Marking and mode of delivery (*second revision*)'.

**6.2** The washers shall be packed as agreed to between the supplier and the purchaser. The packages containing washer shall be marked with the size and manufacturer's name or trade-mark.

**6.2.1 ISI Certification Marking** — Details available with the Indian Standards Institution.

**7. Sampling** — The method of sampling and acceptance criteria of fixing screws shall be in accordance with IS : 2614 - 1969 'Methods for sampling of fasteners (*first revision*)'.

## EXPLANATORY NOTE

This standard was first published in 1973. This revision is being undertaken to bring the standard in line with the latest development in the threaded fastener industry.

In the preparation of this standard, assistance has been derived from DIN 15237-1980 [Continuous mechanical handling equipment, seating screws and cupped washers for the attachment of components to bolts].